

## CONGENITAL LUMBAR HERNIA, AT THE TRIANGLE OF PETIT.\*

BY CHARLES N. DOWD, M.D.,

OF NEW YORK.

Surgeon to the General Memorial Hospital and St. Mary's Hospital for Children.

LUMBAR hernia has been a subject of scholastic rather than surgical interest, and there has been much discussion as to its exact anatomical location.

Under the following four headings are included the supposed sites of exit from the abdominal cavity which have been most discussed. (1) The triangle of Petit; (2) the superior lumbar triangle (or rhombus), described by Grynfelt<sup>1</sup> and Lesshaft,<sup>2</sup> and situated just below the twelfth rib. The ilio-costal muscle forms the posterior boundary of this space, and the external oblique the anterior; the serratus posticus inferior and the end of the twelfth rib are above it and the internal oblique below it; the latissimus dorsi lies over it. (3) A defect in the aponeurosis of the latissimus dorsi is described by Braun.<sup>3</sup> (4) Lieber<sup>4</sup> and Hartmann have described inconstant defects in the wall of the lumbar region near the triangle of Petit which could be the sites of lumbar hernia. The condition is so uncommon that few cases have been observed and very few reports of dissections have been recorded. MacReady, in his *Treatise on Ruptures* (1893), states that "of hernia in the lumbar region very few have been found and only one has been dissected" (not referring to those which follow abscess or injury).

In the *Atlas and Epitome of Abdominal Hernias* by Georg Sultan (1902), the statement is made that "post-mortem examination and exact dissection have never yet irrefutably proved that Petit's triangle formed the hernial orifice in any

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case of lumbar hernia," and that a similar statement could be made concerning the superior lumbar triangle. These statements were made after studying the analysis of 29 cases which Braun had made in 1879, and the 51 cases which Grange<sup>5</sup> and Besendonk had made at a later time.

Baracz in an exhaustive article on the subject in Langenbeck's Archives in 1902 (Bd. lxxviii, s. 631-677), states that lumbar hernias are uncommon and not sufficiently understood and that only three cases are known where the place of exit was verified by autopsy. He reported and collected enough cases to bring the total number to 68, including the congenital, traumatic, and spontaneous varieties and those following cold abscess. In order to determine the most probable place of exit of these hernias he dissected the lumbar regions of 38 cadavers and published drawings of each case. He thinks that the triangle of Petit is not likely to be the site of the hernia but rather the superior triangle or rhombus already referred to. He named this the "*spatium tendineum lumbale*." It was present in 95 per cent. of his dissections. He called attention to the defect in the aponeurosis of the internal oblique muscle here and to the passage of the subcostal nerve and the accompanying artery and vein. He considers the next weakest spot in the lumbar region to be in the tendinous part of the *latissimus dorsi* where the *ramus lumbalis* and the ileo-lumbar vessels go through.

There has been one case of lumbar hernia shown before the New York Surgical Society, by Dr. Coley, in 1901, and he referred to another which had been successfully operated upon in the Hospital for the Ruptured and Crippled.

The condition is manifestly not common and the writer therefore presents this patient and the accompanying photograph and drawings which depict the hernia and the operation for its cure.

The child, who is three and a half years old, was brought to him when three months old by Dr. Eversfield, for a protrusion in the lumbar region. This was about the size of a goose-egg,

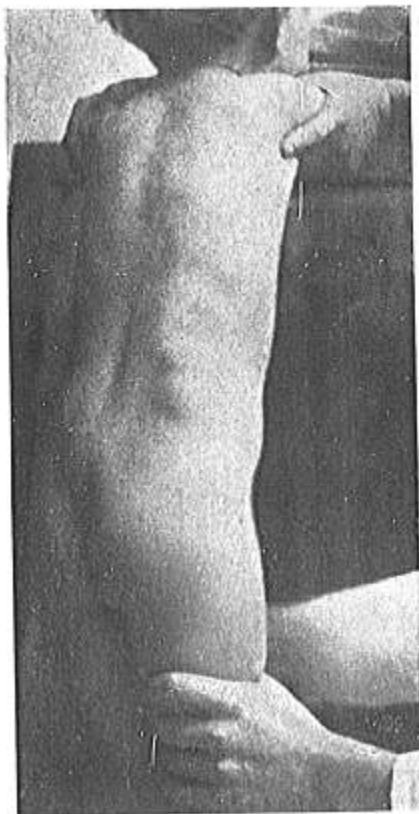


FIG. 1.—Congenital lumbar hernia, presenting through an enlarged triangle of Petit.

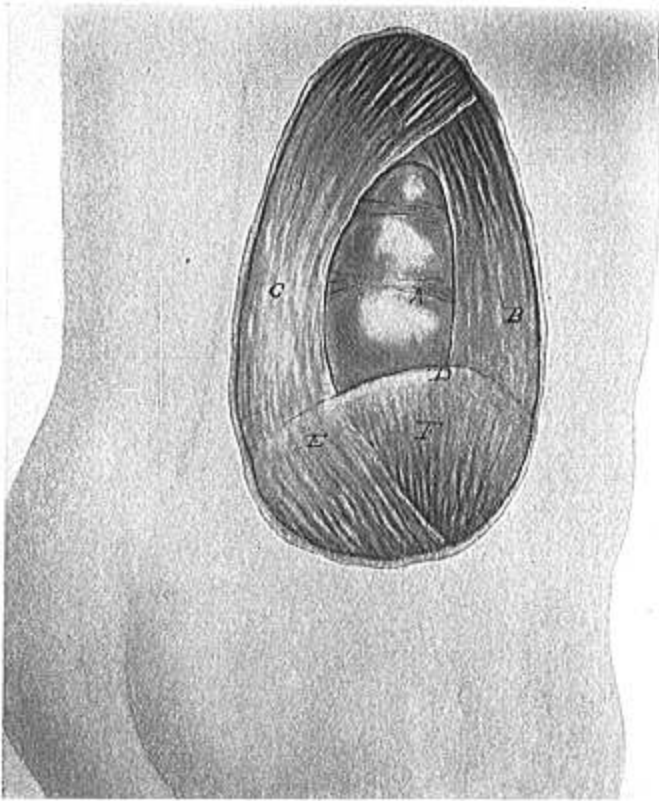
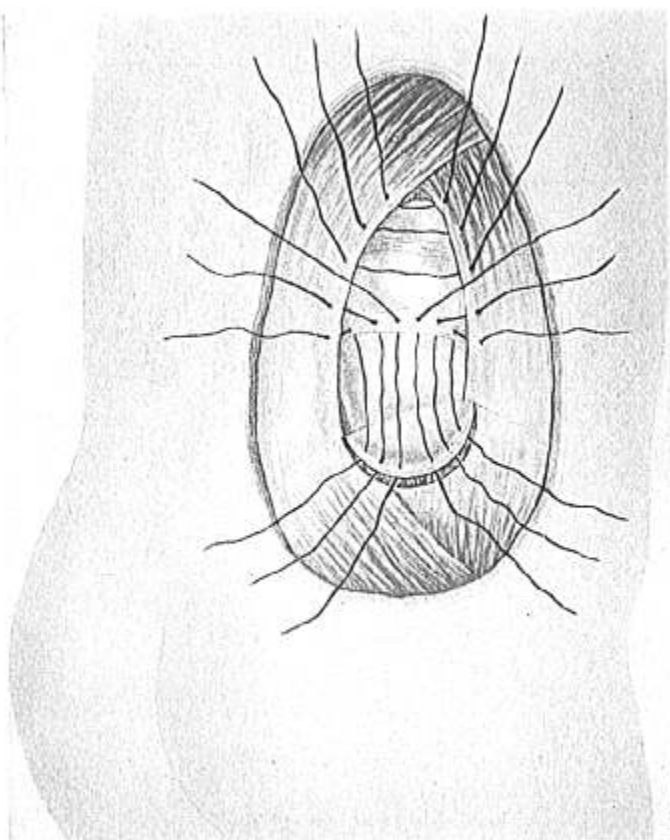


FIG. 2.—Congenital lumbar hernia. *A*, Transversalis fascia. *B*, External oblique muscle. *C*, Latissimus dorsi muscle. *D*, Crest of ilium. *E*, Gluteus maximus muscle. *F*, Gluteus medius muscle.

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**FIG. 3.**—Operation for the cure of congenital lumbar hernia. Flap composed of fascia lata and aponeurotic part of *gluteus maximus* and *medius*. Stitches placed for suturing this flap to the lumbar fascia, to the external oblique muscle and to the *latissimus dorsi* muscle and for drawing the upper parts of the *latissimus dorsi* and external oblique together.

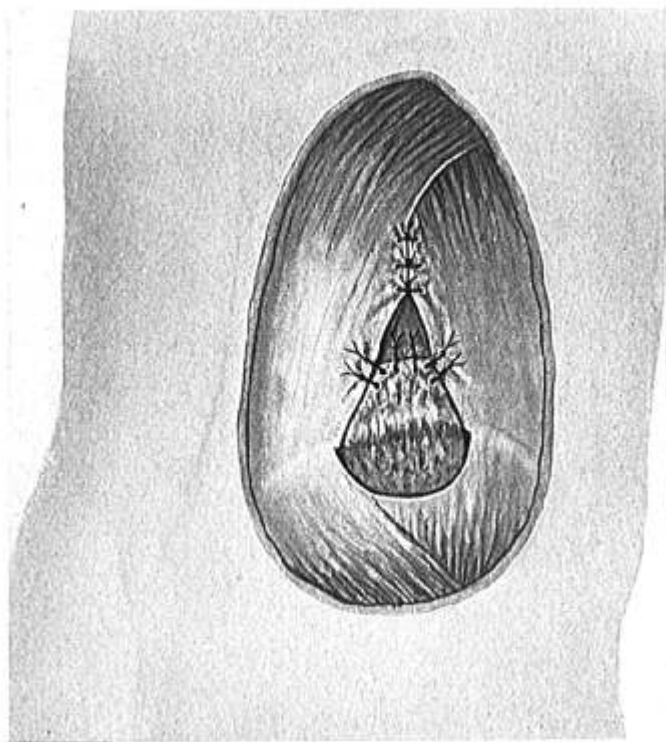


FIG. 4.—Stitches tied, leaving a triangular defect above the flap.

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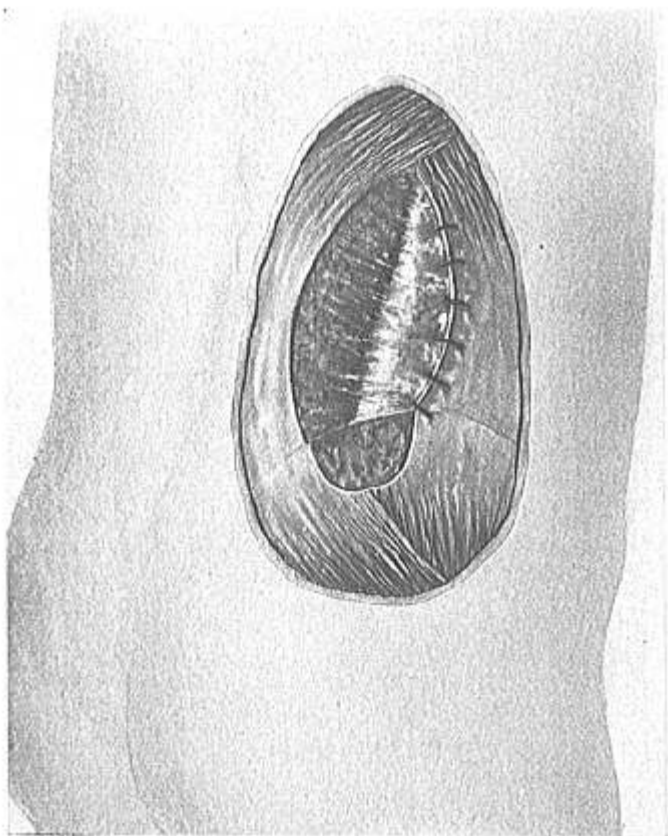


FIG. 5.—Triangular defect and sutured area covered in by a flap from the aponeurosis of the latissimus dorsi muscle.

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and the margins of the hernial openings could be distinctly felt and corresponded to Petit's triangle. An elastic belt was applied and held the protrusion well in position for more than two years, but as the child grew the hernia also increased in size, and the accompanying weakness was a menace to the child and consequently a source of much anxiety to the parents. Its appearance is shown in Fig. 2. The opening was larger than the palm of one's hand and bulged in a marked way on coughing or upon exertion. There were two transverse constrictions across it, and in the lower part there was a distinct soft nodule.

On incision the hernia was seen to come through the triangle of Petit, which was greatly enlarged. The transverse bands were thickened portions of the lumbar fascia. The sac of the hernia was distinct, but there was no narrow neck. The nodule at the lower end was the appendix vermiformis. This was removed; a portion of the sac was excised; and the tissues were then brought together from the sides; the margins of the external oblique and the latissimus dorsi being drawn together as far as possible. After this was done, there was, however, a triangular defect above the crest of the ilium. An effort was made to close this in with an aponeurotic flap turned up from below. The fascia lata and the aponeurotic tissue about the insertion of the gluteus maximus and medius formed a fibrous layer which could be used as a flap, and which was turned up, having the attachment at the crest of the ilium as a hinge. This was stitched in place with chromic gut. Some sutures passing through the previously mentioned transverse band, some through the edge of the latissimus dorsi, and others through the edge of the external oblique muscle. There was, however, still a triangular defect above the flap, and this, together with the repaired area, was covered by turning forward a flap cut from the aponeurosis of the latissimus dorsi. This was stitched to the external oblique.

The closure of the defect was satisfactory, but the operation had the prime defect of leaving a large amount of ill-nourished tissue in the wound, and much chromicized gut which was used for stitching. The greatest possible strain was put upon this tissue, since the child promptly developed pneumonia, and at a later time German measles, and there was a suppuration of the wound. In spite of these complications, however, the result is good and the lumbar wall is firm, eight months having elapsed



since the operation. He walks and holds his body well, and does not seem to suffer from the injury which has been done to the aponeurotic structures of the region.

## BIBLIOGRAPHY.

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- <sup>5</sup> J. Grange. Thèse de Lyon, 1896.